REMARKS

Claims 1-4, and 6-19 are pending.

Claim 5 is cancelled.

Claims 14-19 are new.

Claims 1, 4, and 10-12 are amended.

Claims 11-13 are rejected under 35 USC 102(b).

Claims 1-4 and 6-10 are rejected under 35 USC 103(a).

The rejections are traversed.

Claim Amendments

Claims 1, 4, and 10-12 are amended. Claims 14-19 are new. Support for the amendments may be found in the application as filed, for example, on pages 5-7, and 11-14, and FIGS. 3-4. No new matter has been added.

Claim rejections under 35 USC §102

Claims 11-13 are rejected under 35 USC 102(b) as being anticipated by Andrew S. Tanenbaum, "Computer Networks", Third Edition, 1996 (hereinafter Tanenbaum).

As amended, claim 11 includes "analyzing a set of parameters in an incoming data packet, wherein the set of parameters analyzed depends upon a type of service access point from which the data packet came." Accordingly, the parameters that are analyzed are parameters of the data packet.

The Examiner cited the quality of service parameters of Tanenbaum for analyzing the set of parameters. However, each of the enumerated parameters is related to the transport of a packet, not parameters in the packet itself. For example, "Connection establishment delay" and "Transit delay" relate to times taken in transporting a packet. In another example, "Connection establishment failure probability" and "Resilience" relate to probabilities of failures or terminations of connections. Other parameters indicate the protection implemented by the transport layer (Protection), the amount of data transmitted (Throughput), number of lost or garbled messaged (Residual error ratio), and the importance of a connection (Priority). Although each of these parameters relate to characteristics of a connection formed by data packets, there is no suggestion that the parameters analyzed are the parameters in a data packet.

Furthermore, as recited in claim 11, "the set of parameters analyzed depends upon a type of service access point from which the data packet came." In the rejection of claim 11, it is unclear what the Examiner is citing for the service access point. In other rejections, the Examiner is using a TCP socket as a service access point. See Office Action June 1, 2007, p. 4. No mention is made of a set of parameters depending on the particular TCP socket.

Accordingly, Tanenbaum does not teach each and every element of claim 11 and dependent claims 12-13. The Applicant respectfully requests that the Examiner withdraw the rejection of claims 11-13.

Claim 12 includes "analyzing the data packet according to a plurality of sets of parameters, each set of parameters including a priority; wherein the sets of parameters are used in analyzing the data packet in order of priority." Accordingly, each set of parameters includes a priority. That priority is used to determine the order the sets are used in analyzing the data packet.

Tanenbaum does mention priority. However, the priority is the priority for servicing connections so that higher priority connections are services before lower priority connections. Tanenbaum, p. 483. At best, the priority in Tanenbaum indicates an order in which data packets from different connections are processed. It does not relate to multiple analyses of a single data packet in order of priority.

Accordingly, Tanenbaum does not teach each and every element of claim 12. The Applicant respectfully requests that the Examiner withdraw the rejection of claim 12.

Claim rejections under 35 USC §103

Claims 1-4 are rejected under 35 USC 103(a) as being unpatentable over Tanenbaum in view of Raphaeli et al. (U.S. Pub. No. 20030103521).

A. Claim 1

As amended, claim 1 includes "classifying the application data as internet protocol (IP) based or non-IP based according to the associated service access point."

The Examiner has cited a TCP socket as a service access point. Tanenbaum does describe a neutral term "Transport Service Access Point" to describe both IP address + local port pairs and AAL-SAPs in ATM networks. Tanenbaum, p. 489. Since ATM may or may not be

used with IP, an ATM SAP may or may not IP based. See Tannenbaum, p. 449. Even though service access points are described as IP and non-IP based, there is no mention of a classification based on this distinction.

Claim 1 also includes "determining if a connection exists for the application data in response to the classification of the application data." Thus, the classification of IP or non-IP based is used to determine if a connection exists.

The Examiner cited a SOCKET call as determining if a connection exists, where a failure to create a socket indicates that one exists. However, Tanenbaum does not describe making this determination in response to a classification of the application data as IP or non-IP based.

Moreover, the SOCKET call is the first thing a process must do for network I/O. Stevens, p. 267 (cited in rejection of other claims for details on Berkeley sockets.) As a result, the SOCKET call cannot be the determination if the connection exists. For example, in claim 1, the application data was classified according to the service access point through which it was received. If the socket was the service access point and data was received through it, it must have been created already. There is no suggestion to make another SOCKET call to create the socket after application data was received through it.

The addition of Raphaeli does not cure the deficiencies of Tanenbaum. Raphaeli is directed towards a media access control (MAC) protocol that is intended for use over noisy shared media channels. Raphaeli, Abstract. A MAC layer is a sublayer of the data link layer. Tanenbaum, p. 243. Referring to Figs. 1-18 and 1-19 of Tanenbaum, it can be seen that the IP layer is higher than the data link layer and hence the MAC layer. Accordingly, a MAC layer does not depend on the IP layer, thus, any analysis of the MAC layer does not reveal whether the data is IP based. Moreover, there is no mention of IP in Raphaeli. As a result, Raphaeli does not suggest classifying or determining if a connection exists based on a classification of IP or non-IP.

Accordingly, the combination of Tanenbaum and Raphaeli does not teach or suggest each and every element of claim 1. The Applicant respectfully requests that the Examiner withdraw the rejection of claim 1 and dependent claims 2-4.

B. Claim 4

Claim 4 recites that "the power line communication system is connection-oriented." In addition, claim 4 recites that "receiving application data further comprises: receiving

connectionless application data from the application; and mapping the connectionless application data into transport data for a power line communication system connection." Thus, connectionless application data is mapped into transport data of a connection of the connection-oriented power line communication system.

In contrast, as described in the cited section of Tanenbaum, at the transport layer or the network layer, the connection is either connection-oriented or connectionless. Tanenbaum, p. 480. However, no mention is made of the connection orientation of the application data presented to the transport layer. Accordingly, the combination of Tanenbaum and Raphaeli does not teach or suggest each and every element of claim 4. The Applicant respectfully requests that the Examiner withdraw the rejection of claim 4.

C. New Claims 14-19

Claim 14 recites "accessing a classification table for a mapping of the service access point to a connection identifier; and providing a connection associated with the connection identifier as the connection." Accordingly, a classification table contains a mapping of service access points to connection identifiers.

In Tanenbaum, a SOCKET call returns a file descriptor. Tanenbaum, p. 487. Although this file descriptor can be used in subsequent SEND and RECEIVE calls, the use of it does not describe a classification table mapping the service access point to a connection identifier.

Claim 15 recites "accessing a classification table for a mapping of the service access point and at least one of an IP address, a port number, and a type of service field to the connection identifier; and providing a connection associated with the connection identifier as the connection." Accordingly, the association in the classification table of connection identifiers is based on the service access point and additional data. Claim 16 includes "accessing the classification table for a mapping of the service access point, an IP address, and a port number to the connection identifier."

In contrast, in Tanenbaum, the transport service access point (TSAP) is described with reference to the Internet as an IP address and a local port. In other words, the IP address and the local port are the service access point. Tanenbaum, p. 489. Accordingly, a service access point that is distinct from an IP address, a port number, or a type of service field, and is associated in a classification table is not described in Tanenbaum.

Claim 17 includes "comparing the application data with at least one classifier rule for a match; and providing a connection associated with a matching classifier rule as the connection." Claim 18 recites "comparing the application data only with classifier rules associated with the service access point."

The Examiner cited the protocol argument of a socket call of Stevens as a rule. However, the argument of the socket call merely describes what type of socket is desired. Stevens, p. 267. Neither Tanenbaum, nor Stevens describes a comparison of application data to an argument of the socket call.

The Examiner also cited the "Leaky Bucket Algorithm" in reference to a rule. However, the Leaky Bucket Algorithm is not described as being associated with a connection to be used as the connection for the application data. Rather, the Leaky Bucket Algorithm has decisions such as: "If there is room in the queue, add, otherwise, discard; and every clock tick, transmit a packet." Tanenbaum, p. 381. The comparison of a packet to room left in the queue does not result in a connection.

Furthermore, there is no mention of whether the Leaky Bucket Algorithm is based on connections. The algorithm is in the Network Layer section of Tanenbaum. IP is one example of a layer equivalent to the network layer. However, IP is connectionless. Thus, there would be no association of the Leaky Bucket Algorithm to a connection if it was implemented for IP packets.

Claim 19 recites "for application data that is audio/visual application data comparing the application data to only at least one destination address within the at least one classifier rule." First, none of the cited references specifically references audio/visual application data. Second, no rule described where the application data is only compared with a destination address.

Accordingly, new claims 14-19 are not taught or suggested by the combination of Tanenbaum, Stevens, and Raphaeli.

D. Claim 6

Claims 6-10 are rejected under 35 USC 103(a) as being unpatetnable over Andrew in view of W. Richards Stevens, "UNIX Network Programming", 1990, hereinafter Stevens.

Claim 6 recites "classifying the data packet according to the service access point and at least one rule, causing the packet to be associated with a connection."

As described above, the Examiner cited the socket and parameters used in creating the socket as the service access point and a rule for classifying data packets. However, the socket call is for creating a socket. By the point of the socket call, the socket has not been created, thus, no data packets could have been received through the socket as the service access point. As described above, a new socket call would not be made if data was just received through the socket.

Furthermore, Tanenbaum describes a service access point as having an address that uniquely identifies it. Tanenbaum, p. 22. Newly created sockets do not have address. The address is assigned by the BIND primitive or the CONNECT primitive. Tanenbaum, p. 487. Accordingly, the service access point is created when an address is associated in the BIND or CONNECT primitive. As a result, the parameters used in creating a socket are part of a service access point. Thus, something else must be used as the rule in the classification of the data in claim 6.

Accordingly, the combination of Tanenbaum and Stevens does not teach or suggest each and every element of claim 6 and dependent claims 7-10. The Applicant respectfully requests that the Examiner withdraw the rejection of claims 6-10.

E. Claim 10

Claim 10 recites that "classifying the data packet further comprising analyzing a set of parameters in the data packet to determine if the parameters match those of a rule, and if the parameters do match, associating the data packet with a connection identified by a connection identifier in the rule."

The Examiner cited the "Leaky Bucket Algorithm" as the rule. As described above, the Leaky Bucket Algorithm does not result in a connection identified by the rule. Accordingly, the combination of Tanenbaum and Stevens does not teach or suggest each and every element of claim 10. The Applicant respectfully requests that the Examiner withdraw the rejection of claim 10.

Conclusion

For the foregoing reasons, reconsideration and allowance of claims 1-4, and 6-19 of the application as amended is requested. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

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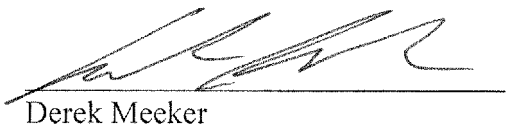

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